We claim:

1. A composition comprising particles of bioactive glass with a particle size less than about 20 μm in diameter and a suitable carrier for oral, intramuscular, intraperitoneal or intravenous administration.

2. The composition of claim 1, wherein the carrier is suitable for intravenous administration.

3. The composition of claim 1, wherein the carrier is suitable for intramuscular or intraperitoneal administration.

4. The composition of claim 1, additional comprising one or more therapeutic agents.

5. The composition of claim 4, wherein one or more therapeutic agents are selected from the group consisting of healing promotion agents, growth factors, anti-inflammatory agents, and anesthetics.

6. The composition of claim 1 wherein the glass includes between about 40 and 86 percent by weight of SiO_2, between about 0 and 30 percent by weight of Na_2O, between about 4 and 46 percent by weight of CaO and between about 1 and 15 percent by weight of P_2O_5.

7. The composition of claim 1, wherein the bioactive glass has a particle size range less than about 2 microns.

8. A method for systemically minimizing the production of TNF-α caused by an inflammatory response in a patient comprising orally or intravenously administering an effective TNF-α lowering amount of bioactive glass particles with a size less than about 20 μm to the patient.

9. The method of claim 8 wherein the systemic minimization of TNF-α is used prophylactically or therapeutically to prevent or treat a disease state selected from the group consisting of peritoneal adhesions, septic shock, cardiac allograft rejection, systemic inflammatory response syndromes, adult respiratory distress syndrome, ocular injury, delayed cutaneous wound healing, ARDS, pancreatitis, viral hepatitis, hemorrhagic shock, ischemia, reperfusion injury, and rheumatoid arthritis.

10. A method for systemically increasing IL-6 levels in a patient, comprising administering to the patient an effective, IL-6 increasing amount of bioactive glass particles with a size less than about 20 μm.

11. A composition comprising particles of a material with a particle size less than about 20 μm which biodegrades, produces elevated serum concentrations of calcium and phosphorous ions, does not cause elevated plasma TNF-α concentrations, and does cause elevated plasma IL-6 concentrations, in combination with a suitable carrier for oral, intramuscular, intraperitoneal or intravenous administration.

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